

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) ~~Method~~ A method for deadlock free altering of a network routing in a network with flow control on the link level, said network routing is from a first routing function Rold, defining an established connection between a plurality of communication input ports I₁,...,I_n and output ports O₁,...,O_m, in a network element, to a second routing function Rnew, defining a new connection between the said input and output ports, for execution by the network element for transmitting and receiving data packets, said method comprising:

(1) for each input port I_i, performing the following steps:

(1a) applying the first routing function Rold for the input port,

(1b) receiving a token on an input port I_i,

(1c) applying the second routing function Rnew for the input port I_i ,

(1d) forwarding data packets to every output port O_j associated with the input port I_i according to the second routing function Rnew, provided that the output port O_j has transmitted the token,

(2) for each output port O_j, performing the following steps;

(2a) determining if the token has been received on all input ports associated with the output port O_j according to the first routing function Rold,

(2b) transmitting the token on the output port O_j when the token has been received on all said input ports.

2. (Currently Amended) The method ~~Method~~ according to claim 1, wherein the network element is a switch.

3. (Currently Amended) The method~~Method~~ according to claim 1 or 2, wherein the token is included in a data packet.

4. (Currently Amended) The method~~Method~~ according to claim 1, wherein the method is applied to deterministic routing functions.

5. (Currently Amended) The method~~Method~~ according to claim 1, wherein the method is applied to adaptive routing functions.

6. (Currently Amended) The method~~Method~~ according to claim 1, wherein the method is applied to source routing.

7. (Currently Amended) The method~~Method~~ according to claim 5, wherein if the adaptive method gives rise to a cyclic dependency graph, the graph is pruned into a non-cyclic one before the method is applied.

8. (Currently Amended) The method~~Method~~ according to claim 1, wherein the method is applied to only parts of a complete network.

9. (Currently Amended) A network~~Network~~ element, comprising

a plurality of output ports for transmitting data packets to other network elements in a network,

a plurality of input ports for receiving data packets from other network elements in the network,

a processing device,

a memory ,

characterized in that the processing device is arranged to perform a method according to claim 1.

10. (Currently Amended) The network ~~Network~~-element according to claim 9, wherein said routing functions are implemented as tables stored in said memory.

11. (Currently Amended) The network ~~Network~~ element according to one of the claims 9 or 10, wherein said memory comprises computer program instructions arranged to perform said method when executed by said processing device.

12. (Currently Amended) A computer ~~Computer~~-network system, comprising a number of network elements according to claim 9.

13. (Currently Amended) A computer ~~Computer~~ program, embodied on a storage medium or in a memory, for execution by a processing device in a network element,

characterized in that the program comprises a set of instructions arranged to perform a method according to claim 1 when executed by the processing device in the network element.